

USEPA START REGION 6 - HEALTH AND SAFETY PLAN EMERGENCY RESPONSE

BACKGROUND AND CONTRACT INFORMATION	
Prepared by: <u>S. Check</u> Project Identification: Contract No. TDD: <u>West Fertil. Fertil.</u> Site Name: <u>TBD 1441</u> Site Address: <u>780 1441</u> EPA OSC: <u>Mark Hayes</u> Phone Number: <u>214-754-</u> Site Contact: N/A Phone Number: N/A	W.O. No.: 20406.012. Date of Response: <u>4/17/2013</u> Tier of Response: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 Site History/Current Information: (describe briefly) <u>Fertilizer Plant Explosion</u>
Scope of Work: (describe briefly, attach site map including work zones) <u>TBD - Air Monitoring</u>	
Directions to Site: <u>See Map</u> Location: <input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Urban/Residential <input type="checkbox"/> Rural <input type="checkbox"/> Government Facility	
Physical Description of Site (draw line across non-applicable item(s)) Size of Site: <u>sq. ft. 11 Acres</u> Nearest waterway. Name: <u>NA</u> Distance from site: <u> </u> feet Distance of site to nearest residence: <u><500</u> feet Distance to nearest school: <u><500</u> feet Distance to nearest public building: <u><1500</u> feet	
Response Team	
TRAINING REQUIREMENTS: Emergency Response Team Members must have current training certification in HAZWOPER in compliance with 29 CFR 1910 and 29 CFR 1926, including specialty training such as Confined Space Entry, as appropriate.	
MEDICAL REQUIREMENTS: Emergency Response Team Members must be certified as medically fit to work with Hazardous Materials and Hazardous Chemicals, and to wear a respirator, if appropriate, in accordance with 29 CFR 1910 and 29 CFR 1926.	
FIT TEST REQUIREMENTS: Emergency Response Team Members entering any area requiring the use or potential use of any respirator must have had as a minimum, a qualitative fit test, administered in accordance with OSHA 29 CFR 1910.134 or ANSI within the last 12 months.	
Signatures below indicate that team members have read and agree to follow the provisions of this HASP.	
Reviewed by: <u>Ben Latham / Sam Check</u> <u>TJG</u> START Site Team Leader: <u>Ben Latham / Sam Check</u> <u>Jeff Lowelling / Jeff Lowelling</u> Signature: <u> </u> <u>4/18/13</u> <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Medical Current <input type="checkbox"/> Fit Test Current (Qual.) <input type="checkbox"/> SHSC training completed </div> <div> <input type="checkbox"/> Training Current <input type="checkbox"/> Fit Test Current (Quant.) <input type="checkbox"/> EC/RCRA training completed </div> </div>	
Site Safety Officer/Site Environmental Compliance Officer: <u>Sam Check</u> Signature: <u> </u> <u>4/18/2013</u> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Medical Current <input checked="" type="checkbox"/> Fit Test Current (Qual.) <input checked="" type="checkbox"/> SHSC training completed </div> <div> <input checked="" type="checkbox"/> Training Current <input checked="" type="checkbox"/> Fit Test Current (Quant.) <input checked="" type="checkbox"/> EC/RCRA training completed </div> </div>	

Team Member: David McLarty, Ben Lathan, David Crow, Alex Byrum

Signature: DSMCA Date:

☐ Medical Current

☐ Training Current

☐ Fit Test Current (Qual.)

☐ Fit Test Current (Quant.)

Team Member: Derrick Cobb, Tom Walzer, Mark Balhoff, Lee Ellner

Signature: Date:

☒ Medical Current

☒ Training Current

☒ Fit Test Current (Qual.)

☒ Fit Test Current (Quant.)

Jeff Lewellin
Jeff Lewellin

SITE SPECIFIC HAZARD EVALUATION

A copy of the Field Operations Manual must be available to all team members. See ER vehicle for a copy of the manual.

☐ BIOLOGICAL HAZARDS
☒ CHEMICAL HAZARDS

☐ RADIATION HAZARDS
☒ PHYSICAL HAZARDS

Biological Hazards:

☒ Animals ☐ Reptiles ☐ Poisonous Plants
☐ Snakes ☒ Insects ☐ Raw Sewage
☐ BBP ☐ Etiologic Agents

FLD 43 — WESTON Biohazard Field Operating Procedures
FLD 44 — WESTON BBP Exposure Control Plan - First Aid Procedures
FLD 45 — WESTON BBP Exposure Control Plan - Working with Infectious Waste

Radiation Hazards:

☐ Ionizing Radiation
☒ Non-Ionizing Radiation (includes ultraviolet, infrared, radio-frequency, microwave, and laser)
☐ NORM

Chemical Hazards:

☒ Explosive ☐ Corrosive ☐ Reactive ☐ Water Reactive
☒ Flammable ☐ Oxidizer ☐ Other -

Special Considerations

Helicopter/Airplane Operations – Pilots must provide safety briefings for all passengers

Carbon Monoxide – Personnel should not linger or work near exhaust pipes from vehicles or equipment

UV light exposure – Personnel should dress so as to cover as much exposed skin as possible, use a sunscreen with a protection factor (PF) of 15 or greater and wear tinted safety glasses.

Motor Vehicles - Drivers shall maintain a safe speed at all times and seat belts must be worn.

Security- Evaluate site security of the response location (preresponse). Address any concerns to your Health and Safety Officer.

List of Chemicals and Quantities/Concentrations: (attach chemical information or MSDS for contaminant or spilled material in Appendix A).

Note: MSDS for materials brought for the response (eg. calibration gases, rinsing solutions, etc...) do not have to be attached to the HASP. However, copies of the MSDS must be available on site at all times.

HEALTH AND SAFETY EVALUATION

1.1.1 Physical Hazards of Concern

Physical Hazard Condition	Physical Hazard	Attach OP	WESTON OP Titles
Loud noise	Hearing loss/disruption of communication	<input type="checkbox"/>	Section 7.0 - ECH&S Program Manual Occupational Noise & HC Program
Inclement weather	Rain/humidity/cold/ice/snow/lightning	<input checked="" type="checkbox"/>	FLD02 - Inclement Weather
Steam heat stress	Burns/displaced oxygen/wet working surfaces	<input type="checkbox"/>	FLD03 - Hot Process - Steam
Heat stress	Burns/hot surfaces/low pressure steam	<input checked="" type="checkbox"/>	FLD04 - Hot Process - LT3
Ambient heat stress	Heat rash/cramps/exhaustion/heat stroke	<input type="checkbox"/>	FLD05 - Heat Stress Prevention/Monitoring
Cold stress	Hypothermia/frostbite	<input checked="" type="checkbox"/>	FLD06 - Cold Stress
Cold/wet	Trench/paddy/immersion foot/edema	<input type="checkbox"/>	FLD02 - Inclement Weather
Confined spaces	Falls/burns/drowning/engulfment/electrocution	<input type="checkbox"/>	FLD08 - Confined Space Entry
Industrial Trucks	Fork Lift Truck Safety	<input type="checkbox"/>	FLD09 - Powered Industrial Trucks
Improper lifting	Back strain/abdomen/arm/leg muscle/joint injury	<input type="checkbox"/>	FLD10 - Manual Lifting/Handling Heavy Objects
Uneven surfaces	Vehicle accidents/slips/trips/falls	<input checked="" type="checkbox"/>	FLD11 - Rough Terrain
Poor housekeeping	Slips/trips/falls/punctures/cuts/fires	<input checked="" type="checkbox"/>	FLD12 - Housekeeping
Structural integrity	Crushing/overhead hazards/compromised floors	<input type="checkbox"/>	FLD13 - Structural Integrity
Hostile persons	Bodily injury	<input type="checkbox"/>	FLD14 - Site Security
Improper cylinder handling	Mechanical injury/fire/explosion/suffocation	<input type="checkbox"/>	FLD16 - Pressure Systems - Compressed Gases
Water hazards	Poor visibility/entanglement/drowning/cold stress	<input type="checkbox"/>	FLD17 - Diving
Water hazards	Drowning/heat/cold stress/hypothermia/falls	<input type="checkbox"/>	FLD18 - Operation and Use of Boats
Water hazards	Drowning/frostbite/hypothermia/falls/electrocution	<input type="checkbox"/>	FLD19 - Working Over Water
Vehicle hazards	Struck by vehicle/collision	<input checked="" type="checkbox"/>	FLD20 - Traffic
Explosions	Explosion/fire/thermal burns	<input checked="" type="checkbox"/>	FLD21 - Explosives
Moving mechanical parts	Crushing/pinch points/overhead hazards/electrocution	<input type="checkbox"/>	FLD22 - Earth Moving Equipment
Moving mech. parts	Overhead hazards/electrocution	<input type="checkbox"/>	FLD23 - Cranes, Rigging, and Slings
Working at elevation	Overhead hazards/falls/electrocution	<input type="checkbox"/>	FLD24 - Aerial Lifts/Man lifts
Working at elevation	Overhead hazards/falls/electrocution	<input type="checkbox"/>	FLD25 - Working at Elevation
Working at elevation	Overhead hazards/falls/electrocution/slips	<input type="checkbox"/>	FLD26 - Ladders
Working at elevation	Slips/trips/falls/overhead hazards	<input type="checkbox"/>	FLD27 - Scaffolding
Trench cave-in	Crushing/falling/overhead hazards/suffocation	<input type="checkbox"/>	FLD28 - Excavating/Trenching
Physiochemical	Explosions/fires from oxidizing, flam./corr. material	<input checked="" type="checkbox"/>	FLD30 - Hazardous Materials Use/Storage
Physiochemical	Fire and explosion	<input type="checkbox"/>	FLD31 - Fire Prevention/Response Plan Required
Physiochemical	Fire	<input type="checkbox"/>	FLD32 - Fire Extinguishers Required
Structural integrity	Overhead/electrocution/slips/trips/falls/fire	<input type="checkbox"/>	FLD33 - Demolition
Electrical	Electrocution/shock/thermal burns	<input type="checkbox"/>	FLD34 - Utilities
Electrical	Electrocution/shock/thermal burns	<input type="checkbox"/>	FLD35 - Electrical Safety
Burns/fires	Heat stress/fires/burns	<input type="checkbox"/>	FLD36 - Welding/Cutting/Brazing/Radiography
Impact/thermal	Thermal burns/high pressure impaction/heat stress	<input type="checkbox"/>	FLD37 - Pressure Washers/Sand Blasting
Impaction/electrical	Smashing body parts/pinching/cuts/electrocution	<input type="checkbox"/>	FLD38 - Hand and Power Tools
Poor visibility	Slips/trips/falls	<input checked="" type="checkbox"/>	FLD39 - Illumination
Fire/explosion	Burns/impaction	<input type="checkbox"/>	FLD40 - Storage Tank Removal/Decommissioning
Communications	Disruption of communications	<input type="checkbox"/>	FLD41 - Std. Hand/Emergency Signals
Energy/release	Unexpected release of energy	<input type="checkbox"/>	FLD42 - Lockout/Tag-out
Biological Hazards	Biological Hazards at site	<input checked="" type="checkbox"/>	FLD43 - Biological Hazards
Biological Hazards/BBP	Biological Hazards/BBP at site/First Aid Providers	<input checked="" type="checkbox"/>	FLD44 - Biological Hazards - Bloodborne Pathogens Exposure Cont Plan - First Aid Providers
Infectious Waste	Infectious Waste at site/BBP at site/Infectious Waste	<input type="checkbox"/>	FLD45 - Biological Hazards - Bloodborne Pathogens Exposure Cont Plan - Work With Infectious Waste
Lead Contaminated sites	Lead poisoning	<input type="checkbox"/>	FLD46 - Control of Exposure to Lead
Puncture/cuts	Cuts/ dismemberment/gouges	<input type="checkbox"/>	FLD47 - Clearing, Grubbing and Logging Operations

Physical Hazard Condition	Physical Hazard	Attach OP	WESTON OP Titles
Not applicable	Not applicable	<input checked="" type="checkbox"/>	FLD48 – Federal, State, Local Regulatory Agency Inspections
Not applicable	Exposure to hazardous materials/waste	<input type="checkbox"/>	FLD49 – Safe Storage of Samples
Cadmium	Exposure Control	<input type="checkbox"/>	FLD50 – Cadmium Exposure Control Plan
Process Safety Procedure	Safety Procedure	<input type="checkbox"/>	FLD51 – Process Safety Procedure
Asbestos	Asbestos Exposure	<input type="checkbox"/>	FLD52 – Asbestos Exposure Control Plan
Hexavalent Chromium	Exposure Control Plan	<input type="checkbox"/>	FLD53 – Hexavalent Chromium Exposure Control Plan
Benzene	Exposure Control Plan	<input type="checkbox"/>	FLD54 – Benzene Exposure Control Plan
Hydrofluoric acid	Working with HF	<input type="checkbox"/>	FLD55 – Working with Hydrofluoric Acid
Moving drill rig parts	Crushing/pinch points/overhead hazards/electrocution	<input type="checkbox"/>	FLD56 – Drilling Safety
Vehicles/driving	Accidents/fatigue/cell phone use	<input checked="" type="checkbox"/>	FLD 57 – Motor Vehicle Safety
Improper material handling	Back injury/crushing from load shifts/equipment/tools	<input type="checkbox"/>	FLD 58 – Drum Handling Operations
COC decontamination	COCs/ship,trip, and falls/waste generation/environmental compliance/PPE	<input type="checkbox"/>	FLD59 - Decontamination
Drilling hazards	Electrocution/overhead hazards/pinch points	<input type="checkbox"/>	Environmental Remediation Drilling Safety Guideline - 2005
Fatigue	Long work hours	<input checked="" type="checkbox"/>	FLD60 – Employee Duty Schedule
Benzene/Gasoline	Benzene exposure	<input type="checkbox"/>	FLD61 – Gasoline Contaminant Exposure
Cardiac Arrest	Accident/Heart Attack	<input type="checkbox"/>	FLD62 – 2009 Automatic External Defibrillator (AED) Program Guidelines
Ionizing Radiation	Ionizing Radiation	<input type="checkbox"/>	FLD63 – Using Handheld X-Ray Fluorescence (XRF) Analyzers
Working Alone	Isolated Working Conditions	<input type="checkbox"/>	FLD64 – Employees Working Alone

Some Field Operations have been removed from this list which has been developed for Emergency Response purposes. If these Field Ops apply, refer to the WESTON Safety Officer Field Manual.

Please include a copy of the local 5 day forecast at the end of your HASP

PERSONNEL PROTECTIVE EQUIPMENT - 73D

Tasks to Be Performed	Anticipated Level of Protection	Type of Chemical Protective Clothing	Inner Glove Outer Glove Boot Cover	Type of Respirator (SCBA or APR with Cartridge)
Perimeter Recon	D	Field	NA	NA
Site Entry	D	Field	↓	↓
Visual Documentation	D	Field	↓	↓
Sampling	D	Field	↓	↓
Decontamination				
Other				

DECONTAMINATION PROCEDURES

For Site Personnel:

- ☒ None Anticipated
☐ Dry Decontamination
☐ Wet Decontamination (procedures as follows)
☐ Wash boots and gloves
☐ Remove outer boots
☐ Remove outer gloves
☐ Remove chemical coverall
☐ Remove respiratory protection
☐ Remove inner gloves

For Equipment:

- ☒ None Anticipated
☐ Dry Decontamination
☐ Wet Decontamination (select one or more of the following)
☐ Wash with soap and water
☐ Rinse with distilled water
☐ Rinse with isopropanol
☐ Rinse with methane
☐ Rinse with hexane
☐ Rinse with nitric Acid

The levels of protection required for personnel assisting with decontamination will be:

- ☐ Level A ☐ Level B ☐ Level C ☐ Level D, Modified ☒ Level D

Disposal of decontamination wastes and spent PPE: (provide a description, including storage area, hauler, and final disposal site, if applicable)

COMMUNICATION

- ☒ Buddy System ☐ Radio ☐ Air Horn for emergencies ☐ Pager
☐ Hand Signals ☐ Visual Contact ☐ Car Horn (3 quick blasts for evac.) ☒ Cell Phone

General Signals:

THUMBS UP – I'm OK/I Agree
 THUMBS DOWN – I Don't Agree
 HANDS ACROSS THROAT – Out of Air/Trouble Breathing
 GRAB HAND/ARM – Come with Me
 HANDS ON HEAD – I Need Assistance

List site cell phone #:

(b) (6)

* See Site Contact List

HAZARD MONITORING

Direct Reading Instruments	Multigas monitor (eg. MultiRAE, MultiWarn, Passport)	Toxic gas monitor (VRae or PAC III)	Radiation monitor (eg. Ludlum 19, Ludlum Model 3, RAM 4)	PID/FID (eg. Photovac, MicroFID, HNU, Foxboro OVA or TVA)	Miniram (dust)	Draeger Tubes	OTHER
Action Level	For LEL >25% open air – Leave >10% CSE – Leave For oxygen < 19.5%, >23% – Leave For toxics, see next column	See exposure limit for each chemical prior to starting work, leave when alarms activate.	3X background to 1 mR/HR – Caution; 1 mR/HR – Leave	For Unknowns: 1-5 units, upgrade to Level C 5-500 units, upgrade to Level B	Visible dust >2.5 mg/m ³ , sustained for 15 minutes, implement Engineering controls or upgrade to Level C	See exposure limits for each chemical	

Frequency and Types of Monitoring: (give frequency for routine and periodic monitoring)

Tasks to be Performed	Monitoring Instruments	Upon Entry (E) or Continuous (C)	Perimeter	Routine (R) or Periodic (P)
Perimeter Recon	MultiRAE w/ NH ₃	E/C	P	R
Site Entry	MultiRAE w/ NH ₃	E/C	P	R
Visual Documentation	"	"	"	R
Sampling	"	"	"	R
Decontamination				
Other				

SAMPLING ACTIVITIES

☐ Yes ☒ No

Describe types of samples and methods used to obtain samples:

WHAT: Air Surface Water Ground Water Drum/Tank Soil Sediment Biological Wipe Other: _____

HOW: Poly Scoop Drum Thief/ColiWasa SS trowel/spoon Split Spoon Auger Bailer Dredge Bottle Immersion Pump Low-Flow Pump Other: _____

Name of Dangerous Goods Shipper: _____

Was laboratory notified of potential hazard level of samples? ☐ Yes ☐ No

VEHICLE USE ASSESSMENT AND SELECTION:

Driving is one of the most hazardous and frequent activities for Weston employees. The most appropriate type vehicle(s) authorized for use on this project is/are:

1. ER Truck
2. Dodge Truck
3. _____
4. _____

The following Project Team Member's qualifications and experience in driving these types vehicles was evaluated and found to be acceptable (indicate vehicles types(s) number next to employee name).

1. Sam Cheek (1, 2)
2. David McIntyre (1, 2)
3. David Crow (1, 2)
4. Ben Latham (1, 2)
5. Derrick Cobb (1, 2)
6. Tom Walker (1, 2)
7. Mark Rothoff (1, 2)
8. Lee Elman (1, 2)
9. _____
10. _____

The project site was evaluated and a Traffic Control Plan ☐ is required ☒ is not required.

If required, the Traffic Control Plan can be found in Appendix _____ of this HASP.

EMERGENCY CONTACTS

Agency	Contact	Phone Number
Fire/Police/Ambulance		911
WorkCare WESTON Medical Director WorkCare WESTON Program Administrator	Dr. Peter Greaney Heather Lind	From 6 am to 4:30 pm Pacific Time call 800-455-6155 dial 0 or extension 175, Heather Lind to request the on-call clinician.
After-Business Hours (In Case of Emergency Only)	Contact	4:31 p.m. – 5:59 a.m. Pacific Time, all day Saturday, Sunday and Holidays call 800-455-6155 Dial 3 to reach the after-hours answering service. Request that the service connect you with the on-call clinician or the on-call clinician will return your call within 30 minutes.
WESTON Health and Safety	Corporate Health and Safety Department	610-701-3065 or 610-506-5392 (cell)
WESTON Southern Division Health and Safety	Jim Davis	Office – (251) 602-1898 / Cell (334) 319-0380
WESTON Local Health and Safety	Samuel O. Cheek (Dallas/San Antonio) J D Grosbeck (Austin) Ben Latham (START HSO)	469-374-7785/972-977-1579 (cell) 512-651-7155/ 512-657-6866 (cell) 469-374-7717/ 972-213-6618 (cell)
WESTON Equipment and Dangerous Goods Shipping Advisor	Danny Newman	713-796-0040 – whse 713-301-7702 – CELL
WESTON START Program Manager	Robert Beck	704-895-5222
WESTON Readiness Coordinator	David Crow	469-374-7750 (office) 972-978-6802 (cell)
National Response Center		1-800-424-8802
Region 6 EPA Hotline	866-EPA-SPILL	1-866-372-7745
OSHA Hotline		1-800-321-6742
Chem-Tel		1-800-255-3924
ATSDR		(404) 639-0615
ATF (explosives information)		1-800-800-3855
Chemtrec		1-800-424-9300
START Health and Safety Pager	Paul Callahan	781-958-9297

Local Medical Emergency Facility

Name of Hospital:

Address:

Phone No.: 254-694-3165

Note: Call to verify hospital's availability and type of ER capabilities

Type of Service:

- ☐ Physical trauma only
☐ Chemical exposure only
☒ Physical trauma and chemical exposure
☒ Available 24 hours

Route to Hospital (written detail):

See Attachment D for route to hospital.

Travel time from site:
 approx. 20 minutes
 Distance to hospital:
 approx. 20 miles

REVIEW AND COMMENTS

Final Submission of HASP by: _____

Date: _____

Post-Response Review by START Safety Officer: _____

Date: _____

Project start date: 4/19/2013

Plan expiration date: 10/17/2013

Amendments: _____

End date: TBD

Disclaimer: This Health and Safety Plan (HASP) was prepared solely for specific work assigned to WESTON and its subcontractors under the START Region 6 Contract (EP-W-06-42). Use of this HASP by WESTON and its subcontractors is intended to fulfill OSHA requirements as found in 29CFR1910.120. Items not specifically covered within this HASP or its attachments are included by reference to 29CFR1910 and 29CFR1926. To the extent other parties wish to rely on this HASP, they should review its contents and satisfy themselves that it meets requirements for their work assignments.

11. TASK-BY-TASK ASSESSMENTS

Task-By-Task Assessment (COMPLETE ONE SHEET FOR EACH TASK)	
TASK DESCRIPTION	
Collect Soil Samples for Pesticide (insecticide/herbicide/fungicide) analysis at locations determined by EPA.	
EQUIPMENT REQUIRED/USED (Be specific, e.g., hand tools, heavy equipment, instruments, PPE)	
Scoops, sample jars, baggies, tape, coolers.	
POTENTIAL HAZARDS/RISKS	
Chemical	
<input checked="" type="checkbox"/> Hazard Present	Risk Level: <input type="checkbox"/> H <input type="checkbox"/> M <input checked="" type="checkbox"/> L
What justifies risk level? Hazards associated with the site incident (chemical releases) have been mitigated and air monitoring has not indicated elevated readings of contaminants of concern (ammonia). Proper ppe (Level D) will be utilized.	
Physical	
<input checked="" type="checkbox"/> Hazard Present	Risk Level: <input type="checkbox"/> H <input checked="" type="checkbox"/> M <input type="checkbox"/> L
What justifies risk level? Hazard associated with driving to and from sampling locations, and debris. Staff will drive defensively and maintain situational awareness.	
Biological	
<input checked="" type="checkbox"/> Hazard Present	Risk Level: <input type="checkbox"/> H <input type="checkbox"/> M <input checked="" type="checkbox"/> L
What justifies risk level? Insects and reptiles potentially present in the sampling area.	
RADIOLOGICAL	
<input type="checkbox"/> Hazard Present	Risk Level: <input type="checkbox"/> H <input type="checkbox"/> M <input type="checkbox"/> L
What justifies risk level?	
LEVELS OF PROTECTION/JUSTIFICATION	
Level D PPE	
SAFETY PROCEDURES REQUIRED AND/OR FIELD OPS UTILIZED	
FLDs 02, 11, 12, 20, 43, 44, 48, 57, 60.	

ATTACHMENT A
CHEMICAL CONTAMINANTS

(Attach appropriate Material Safety Data Sheet or fill out Chemical Hazards Evaluation Form.)

HEALTH AND SAFETY EVALUATION — ☐ CHEMICAL HAZARDS

Hazardous Substance	Physical Properties	Normal Physical State	State At Site/Proj. Temp.	Characteristics	Exposure Limits	Route(s) of Exposure/ Symptoms	Monitoring Instruments/ Ionization Potential
Name: <i>As known</i>	<input type="checkbox"/> Explosive <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Reactive <input type="checkbox"/> Water Reactive <input type="checkbox"/> Oxidizer	<input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas Color:	<input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas Color:	pH: FP: LEL: UEL: Auto. Ig.: BP:	<input type="checkbox"/> CA <input type="checkbox"/> PEL _____ <input type="checkbox"/> TLV _____ <input type="checkbox"/> IDLH _____ <input type="checkbox"/> Only toxicological data available <input type="checkbox"/> Other:	<input type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion <input type="checkbox"/> Skin Absorption <input type="checkbox"/> Contact <input type="checkbox"/> Direct Penetration <input type="checkbox"/> Other:	<input type="checkbox"/> PID <input type="checkbox"/> 11.7 eV <input type="checkbox"/> 10.2 eV <input type="checkbox"/> FID <input type="checkbox"/> CGI <input type="checkbox"/> Radiation <input type="checkbox"/> Colorimetric tube Other:
CAS No:	<input type="checkbox"/> Radioactive <input type="checkbox"/> Other	Incompatible With:		MP:		Acute Symptoms:	IP:
Synonyms:				Sp. Gr.:			
				Vap. D.:			
				Vap. P.:			
				H ₂ O Sol.:			
		Other:		First Aid:	% Relative response:		

Calculating Action Levels

For organic contaminants of concern, the following formula is used for each compound known or suspected to be present.

Ammonia	Units
REL*	25
PEL*	1
Equipment Reference/correction fact	9.7
Safety Factor	2
Action Level:	121.25

Action Level for Ammonia for NH# sensors is 12.5 based on 25 ppm REL.

Inorganic contaminant action levels are not much more difficult to calculate; however an aerosol monitor like the Mini-Ram doesn't really have a response factor. It measures total aerosol (dust) concentrations, so you need to convert soil contaminant levels into the amount of contaminant present in the soil that becomes airborne in order to determine exposure levels. That conversion can be done using the following formulas:

No Contaminant of Concern:

Use the OSHA Nuisance Dust PEL of 5 mg/m³ divided by 2 for an Action Level of 2.5 mg/m³.

ATTACHMENT B
SITE SPECIFIC HAZARD COMMUNICATION PROGRAM

Location Specific Hazard Communications Program/Checklist

In order to ensure an understanding of and compliance with the Hazard Communication Standard, this checklist/document in conjunction with the WESTON Written Hazard Communications Program serves as a means of meeting site or location specific requirements. While responsibility for activities within this document reference the WESTON Safety Officer, it is the responsibility of all personnel to effect compliance.

- ☒ Site or other location name/address: West Fertilizer, 1471 Jerry Mashell Drive, West, Texas
- ☒ Site/Project/Location Manager: Sam Cheek / Ben Latham
- ☒ Site/Location Safety Officer: Sam Cheek
- ☒ List of chemicals complied, format: HASP: ☒ Other:
- ☒ Location of MSDS Files: HASP - if any -
- ☒ Training Conducted by (name and date): Site Hazleman
- ☒ Indicate format of training documentation: Field Log: ☒ Other: ☒ FHSTouch
- NA Client briefing conducted regarding hazard communication:
- NA WESTON notified of other employer's or clients hazard communication program as necessary.

List of Hazardous Chemicals/ Material Safety Data Sheets (MSDS)

A list of known hazardous chemicals used by WESTON personnel must be prepared and attached to this document or in a centrally identified location with the MSDS. The SO or location manager is responsible for ensuring the chemical listing remains up-to-date and that when a revised MSDS becomes available, the old one is replaced. A log for, and copies of, MSDS for all hazardous chemicals in use will be kept in the MSDS folder at a location known to all site workers and will be readily available to all employees during each work shift.

Container Labeling

The WESTON Safety Officer (SO) will verify that all containers received from the chemical manufacturer, importer or distributor for use on site will be clearly labeled. The SO is responsible for assuring labels are placed where required and for comparing MSDS's and other information with label information to ensure correctness.

Employee Training and Information

The SO is responsible for the WESTON site-specific personnel-training program. The SO will ensure that all program elements specified below are supplied to all affected employees. At the time of initial assignment for employees to the work site or whenever a new hazard is introduced into the work area employees will attend a health and safety meeting or briefing that includes the information indicated below.

- Hazardous chemicals present at the worksite
- Physical and health risks of the hazardous chemicals
- The signs and symptoms of overexposure
- Procedures to follow if employees are overexposed to hazardous chemicals
- Location of the MSDS file and written hazard communication program
- How to determine the presence or release of hazardous chemicals in the employees work area
- How to read labels and review MSDS's to obtain hazard information
- Steps WESTON has taken to reduce or prevent exposure to hazardous chemicals
- How to reduce or prevent exposure to hazardous chemicals through use of controls procedures, work practices and personal protective equipment
- Hazardous, non-routine tasks to be performed (if any)
- Chemicals within unlabeled piping (if any)

Chemicals in Unlabeled Pipes

Work activities may be performed by employees in areas where chemicals are transferred through unlabeled pipes. Prior to starting work in these areas, the employee shall contact the SO at which time information as to: the chemical(s) in the pipes, potential hazards of the chemicals or the process involved, and safety precautions which should be taken will be determined and presented.

Multi-Employer Worksites

It is the responsibility of the SO to provide other employers with information about hazardous chemicals imported by WESTON to which their employees may be exposed, along with suggested safety precautions. It is also the responsibility of SO and the site manager to obtain information about hazardous chemicals used by other employers to which WESTON employees may be exposed. WESTON's chemical listing will be made available to other employers as requested. MSDS will be available for viewing as necessary.

The location, format and/or procedures for accessing MSDS information must be relayed to affected employees.

ATTACHMENT C
EQUIPMENT CHECKLIST

CHECKLIST

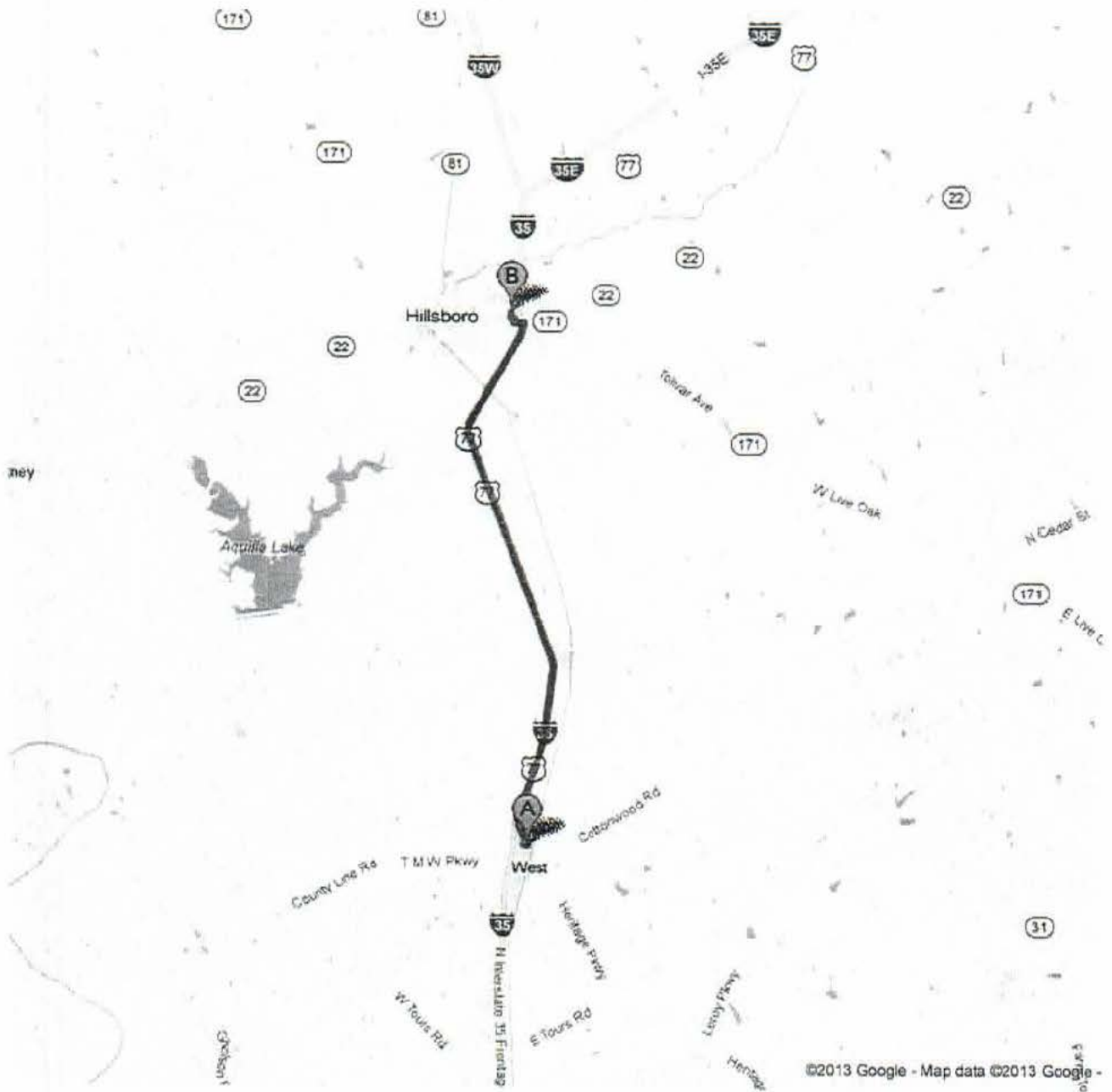
PPE	Instrumentation	Other
<input checked="" type="checkbox"/> Hard Hat - <i>if overhead hazards</i>	<input checked="" type="checkbox"/> Multigas monitor	<input type="checkbox"/> 35mm camera (print) and film
<input checked="" type="checkbox"/> Safety Glasses	<input type="checkbox"/> Toxic gas monitor- specify chemical	<input checked="" type="checkbox"/> Digital camera and diskettes or downloading equipment
<input type="checkbox"/> Face Shield	<input type="checkbox"/> FID	<input type="checkbox"/> Intrinsically safe flashlight and batteries
<input type="checkbox"/> Ear Plugs	<input type="checkbox"/> PID	<input type="checkbox"/> GPS and batteries
<input type="checkbox"/> Coverall (cotton)	<input type="checkbox"/> Radiation meter	<input checked="" type="checkbox"/> Computer with cables
<input type="checkbox"/> Coverall (Tyvek)	<input checked="" type="checkbox"/> Particulate meter	<input type="checkbox"/> Sampling supplies (S box)
<input type="checkbox"/> Coverall (Saranex)	<input type="checkbox"/> Colorimetric tube	<input checked="" type="checkbox"/> First Aid Kit
<input type="checkbox"/> Rain Suit	<input type="checkbox"/> pH paper	<input checked="" type="checkbox"/> Fire extinguisher
<input type="checkbox"/> Gloves latex	<input type="checkbox"/> SpilFyter strips	<input type="checkbox"/> Duct tape
<input type="checkbox"/> Gloves nitrile (inner)	<input type="checkbox"/> Hazcat kit	<input type="checkbox"/> Garbage bags
<input type="checkbox"/> Gloves nitrile (outer)	<input type="checkbox"/> Hapsite	<input checked="" type="checkbox"/> Log Book
<input type="checkbox"/> Gloves butyl rubber	<input type="checkbox"/> Other (specify)	<input type="checkbox"/> Radios
<input type="checkbox"/> Gloves Silver Shields(outer)		<input type="checkbox"/> Mobile phone, pager
<input checked="" type="checkbox"/> Safety Boots		<input type="checkbox"/> Site maps
<input type="checkbox"/> Over boots (latex booties)		<input type="checkbox"/> Compass
<input type="checkbox"/> Rubber Boots		<input type="checkbox"/> Site safety plan
<input type="checkbox"/> Respirator (Full Face APR)		<input type="checkbox"/> Instructions for motor vehicle incident
<input checked="" type="checkbox"/> Cartridge (GMC-P100)		<input checked="" type="checkbox"/> MSDS for calibration gases, solutions, etc... <i>→ needed</i>
<input type="checkbox"/> SCBA		<input type="checkbox"/> Other (specify)
<input type="checkbox"/> Level A Suit		
<input type="checkbox"/> Other (specify)		

ATTACHMENT D

HOSPITAL MAP

Google

Directions to 101 Circle Dr, Hillsboro,
TX 76645
15.3 mi – about 18 mins




A 406 W Shook St, West, TX 76691




1. Head **west** on **W Shook St** toward **N Marable St**


go 404 ft
total 404 ft

 2. Take the 1st right onto **N Marable St**

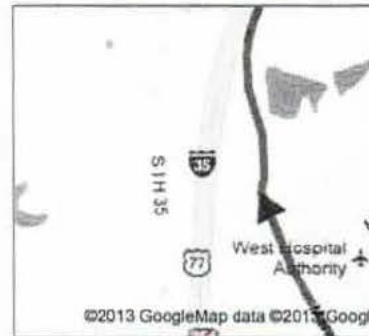
go 0.1 mi
total 0.2 mi

 3. Take the 2nd left onto **Marable St**
About 1 min

go 0.4 mi
total 0.6 mi


 4. Slight right onto **S I H 35/S Interstate 35/N Interstate 35 Frontage Rd**
About 1 min

go 0.4 mi
total 1.0 mi



 5. Take the **Interstate 35 N** ramp on the left

go 328 ft
total 1.1 mi

 6. Merge onto **I-35 N**
About 11 mins


go 13.3 mi
total 14.3 mi

 7. Take exit **368A** toward **Hillsboro**

go 0.1 mi
total 14.5 mi

8. Merge onto **S I H 35/S Interstate 35/N Interstate 35 Frontage Rd**


go 0.2 mi
total 14.7 mi

 9. Turn left onto **TX-171 N/TX-22 W**
About 2 mins


go 0.3 mi
total 15.0 mi

 10. Turn right onto **Coke Ave**

go 0.1 mi
total 15.1 mi

 11. Turn left onto **E Elm St**

go 413 ft
total 15.2 mi

 12. Take the 1st right onto **Jane Ln**
Destination will be on the right

go 0.1 mi
total 15.3 mi

B 101 Circle Dr, Hillsboro, TX 76645



These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data ©2013 Google

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

ATTACHMENT E

INSTRUCTIONS FOR REPORTING NEAR INCIDENTS AND INCIDENTS

The NOI trac should be utilized to report ALL incidents. Incidents include: employee accidents, injuries, auto accidents, property damage/loss, information /data breaches, security concerns, subcontractor injuries/accidents/events, *OR other liability situations or circumstances that could give rise to a claim*. The NOI form is intended to be a preliminary summary (**due within 24 hours/one business day**) reporting what is immediately known of an event or situation. After a NOI report is released, and the appropriate resources within the organization are notified, an investigation should be initiated.

Welcome to NOITrack.: Windows Internet Explorer

http://prdnet/noitrack/IncidentInfo.aspx

File Edit View Favorites Tools Help

Google Search Bookmarks Check AutoFill Sign In

Welcome to NOITrack.:

NOITrack

Open NOIs Search Add New Incident Reports Admin Help Blog

Incident Info Individual Data Investigation File Attachment

☐ Near Incident

Fields marked with * are required

Security	Safety	Computer	Other
<input type="checkbox"/> Threat or Intimidation	<input type="checkbox"/> Vehicle	<input type="checkbox"/> Computer/Technology	<input type="checkbox"/> Environmental
<input type="checkbox"/> Act of Violence	<input type="checkbox"/> Injury	<input type="checkbox"/> Other	<input type="checkbox"/> Property/Equipment Damage
<input type="checkbox"/> Theft	<input type="checkbox"/> Illness		<input type="checkbox"/> Regulatory Agency
<input type="checkbox"/> Vandalism	<input type="checkbox"/> Exposure		<input type="checkbox"/> Other
<input type="checkbox"/> Violation of Company or Government Security Requirements	<input type="checkbox"/> Other Safety		
<input type="checkbox"/> Other Security			

Was this a single event or the latest in a series(describe)?

Note: This description is limited to 255 characters. If more information is required, add the information in the submitted description.

Date of Incident: *

Time of Incident: *

☐ Unknown Date

☐ Unknown Time

Done Local intranet 100%

Please go to NOITrack using the following link to complete incident reporting. If you are in the field and do not have access to NOITrack, please contact someone in your office to do the reporting for you.

<http://prdnet/noitrack/IncidentInfo.aspx>

Questions can be directed to Susan Hipp-Ludwick at 610.701.3046 or Matt Dillon at 610.701.3667

ATTACHMENT G

AHA CHECKLIST AND ERM TOOL SUMMARY

(FOR ER'S LONGER THAN 72 HOURS IN DURATION, RE EVALUATE ERM TOOL)

This tool must be used at the Proposal Stage in PLC, and must also be used prior to the time of individual project execution, including individual Task Orders/Work Assignments such as on an ID/IQ contract.

Click link below for instructions on using this form:

Please provide the following information:

Important information for Opportunity Number OR Project ID field:

It is critical that you enter only one of these values as follows to support linking from other systems:

- Please enter the number or ID only.
- Do not include commas in Opportunity Numbers (enter "111,101", not "111,101").
- Do not add any additional text. This should go in other fields.
- For START Services TCOs, please enter the primary start work order number of the TCO.

II Division:

South

II PLC Approver:

II Opportunity Number OR Project ID: *(see above)*

EPA START Region 6 ER Projects General - Dallas Office

II Client Service Manager:

Robert Beck

II Opportunity OR Project Name:

EPA START Region 6 ER Projects General - Dallas Office

II Project Manager:

David Crow

II ERM Preparer:

Ben Latham

II Subject Matter Expert:

II Brief Description of Scope of Work:

Emergency Response to Oil and HAZMAT Incidents

II EHS Officer:

Various

Indicates Required Fields

Please answer the following 8 questions: **I am confident that this project will not result in risks to the following:**

1. I am confident that this project will not result in risks to Air

Consider the following in your answer:

- Potential release of contaminants (VOCs, particulates, etc.) into air.
- Demolition/removal/renovation of structure containing ACM (Asbestos Containing Material).
- Demolition, removal or renovation of any structure containing ozone depleting substances (e.g., air conditioners, Freon, CFCs).
- Remediation, demolition, removal or renovation of any structure has potential for release of lead or dust, VOCs or CO which may migrate beyond site boundaries.
- Need for air permits.
- Operating a source of air emissions.

Answer

☒ Yes ☐ No

2. I am confident that this project will not result in risks to Water

Consider the following in your answer:

- Surface water or ground water impact.
- Any impact to wetlands or floodplains.
- Any injection of products, treatment chemicals, or waste materials into the ground.
- Potential for storm water discharges to surface water or storm sewer (including all construction activities).
- Removal of vegetation creating potential future runoff.
- Site clearing, dredging, filling on/near water or wetlands.
- Demolition, removal or renovation of any structure containing asbestos.
- Potential for spill/release of hazardous substance or wastes.
- Storage of oil or petroleum products on site.
- Any impact to drinking water supplies.

Answer

☒ Yes ☐ No

3. I am confident that this project will not result in risks to Wastes

Consider the following in your answer:

- Generating/managing/characterizing any wastes.
- Responsible for preparing hazardous wastes for transportation and/or disposal (including characterization and/or manifesting).
- Presence of lead or lead-containing materials.
- Generating/managing any universal wastes (e.g., mercury containing items such as fluorescent lamps, computers, batteries, switches, thermostats, non-empty aerosol cans).
- Presence of PCBs or PCB-contamination.
- Disruption or removal of asbestos-containing materials (ACM).
- Responsible for advising client of characterization of waste.

Answer

☒ Yes ☐ No

4. I am confident that this project will not result in risks to Land

Consider the following in your answer:

- Habitat for endangered, threatened or special interest species.
- Historically sensitive areas (e.g., wetlands, floodplains, critical habitat, prime farm land, coastal zones, historic structures, etc.).
- Naturally occurring radioactive material.

Answer

☒ Yes ☐ No

5. I am confident that this project will not result in risks to Other Environmental Concerns

→Consider the following in your answer

- Storage or transportation/disposal of radioactive material. Equipment containing radioactive material.
- Large quantity of hazardous chemicals such as sulfuric acid, chlorine (used for treatment systems), Hydrogen Peroxide, Potassium Permanganate.
- UXO, MEC or other materials. Significant fire and/or explosion hazard.
- Consider noise levels as well.

Answer

☒ Yes ☐ No

6. I am confident that this project will not result in risks to Stakeholder/Client Concerns

→Consider the following in your answer

- Enforcement Action. Notices of Violation. Court Mandates.
- IRIS. Environmental Liability Transfer. Guaranteed Fixed Price Remediation.
- Impacts to tenants or local residents from activities.
- Impacts to historic or Archeological sites.

Answer

☒ Yes ☐ No

7. I am confident that this project will not result in risks to Subcontractors

→Consider the following in your answer

- Risk Elements 1 through 6 above.
- Previous successful working relationship. SubTrack Status.
- Approved Terms and Conditions.

Answer

☒ Yes ☐ No

8. I am confident that this project will not result in risks to the environment with respect to shipping samples, equipment, or other regulated materials to or from a project location

Answer

☒ Yes ☐ No

HAZARD CHECKLIST Site Manager/EHS Officer:				Task Team (name or reference via daily sign-in sheet)			
Date:							
Location:							
Address:							
HAZARDS IDENTIFIED (check those applicable)							
	Chemical		Biological		Physical		Remote Areas
<input type="checkbox"/>	Flammable/combustible	<input type="checkbox"/>	Insects	<input type="checkbox"/>	Noise	<input type="checkbox"/>	Materials handling
<input type="checkbox"/>	Corrosive	<input type="checkbox"/>	Animals	<input type="checkbox"/>	Heat	<input type="checkbox"/>	High Pressure Washers
<input type="checkbox"/>	Oxidizer	<input type="checkbox"/>	Plants	<input type="checkbox"/>	Cold	<input type="checkbox"/>	Hand and Power Tools
<input type="checkbox"/>	Reactive	<input type="checkbox"/>	Mold/Fungus	<input type="checkbox"/>	Inclement Weather	<input type="checkbox"/>	Low Illumination
<input type="checkbox"/>	Toxic	<input type="checkbox"/>	Viral/Bacterial	<input type="checkbox"/>	Hot Work	<input type="checkbox"/>	Drilling & Boring
<input type="checkbox"/>	Inhalation	<input type="checkbox"/>	Density Gauges	<input type="checkbox"/>	Confined Spaces	<input type="checkbox"/>	Striking against/Struck-by
<input type="checkbox"/>	Eyes/Skin	<input type="checkbox"/>	Radiological	<input type="checkbox"/>	Stored hazardous Energy	<input type="checkbox"/>	Caught-in/Caught between
<input type="checkbox"/>	Pesticides	<input type="checkbox"/>	Ultra-Violet	<input type="checkbox"/>	Elevation	<input type="checkbox"/>	Pushing/pulling
<input type="checkbox"/>	Carcinogen	<input type="checkbox"/>	Sunlight	<input type="checkbox"/>	Utilities	<input type="checkbox"/>	Falls at same level
<input type="checkbox"/>	Asbestos	<input type="checkbox"/>	Infrared	<input type="checkbox"/>	Machinery	<input type="checkbox"/>	Falls from elevation
<input type="checkbox"/>	Lead	<input type="checkbox"/>	Lasers	<input type="checkbox"/>	Mobile equipment	<input type="checkbox"/>	Repetitive motion
<input type="checkbox"/>	UXO/OE/ CWM	<input type="checkbox"/>	XRF	<input type="checkbox"/>	Cranes	<input type="checkbox"/>	High (>110v) Electricity
<input type="checkbox"/>	Process Safety	<input type="checkbox"/>	Isotopes	<input type="checkbox"/>	Manual Material Handling	<input type="checkbox"/>	Slippery surface Ice/Snow
<input type="checkbox"/>	Applying Paint/Coatings	<input type="checkbox"/>		<input type="checkbox"/>	Ladders	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	Scaffolding	<input type="checkbox"/>	
REQUIRED PROTECTION (check those applicable)							
	Engineering Controls		Administrative Control		PPE		Contingency
<input type="checkbox"/>	Guard Rails	<input type="checkbox"/>	Qualified for task	<input type="checkbox"/>	Air Supplying Respirator	<input type="checkbox"/>	Emergency Signal Known
<input type="checkbox"/>	Machine Guards	<input type="checkbox"/>	Trained/Certified	<input type="checkbox"/>	Air Purifying Respirator	<input type="checkbox"/>	Eye wash/shower Location
<input type="checkbox"/>	Sound Barriers	<input type="checkbox"/>	Hot Work Permit	<input type="checkbox"/>	SCBA	<input type="checkbox"/>	First Aid Kit Location
<input type="checkbox"/>	Enclosure	<input type="checkbox"/>	CSE Permit	<input type="checkbox"/>	Hard Hat	<input type="checkbox"/>	Fire Extinguisher Location
<input type="checkbox"/>	Elevation	<input type="checkbox"/>	Lockout/Tag Out	<input type="checkbox"/>	Ear Plugs	<input type="checkbox"/>	Spill Kit Location
<input type="checkbox"/>	Isolation	<input type="checkbox"/>	Work Permit	<input type="checkbox"/>	Ear Muffs	<input type="checkbox"/>	Severe weather shelter
<input type="checkbox"/>	GFCI	<input type="checkbox"/>	Dig Safe Permit	<input type="checkbox"/>	Safety Glasses	<input type="checkbox"/>	Evacuation Routes
<input type="checkbox"/>	Assured Ground Program	<input type="checkbox"/>	Contingency Plan	<input type="checkbox"/>	Goggles	<input type="checkbox"/>	
<input type="checkbox"/>	Apply Anti-slip/skid Mat	<input type="checkbox"/>	Critical Lift Plans	<input type="checkbox"/>	Chemical Goggles	<input type="checkbox"/>	
		<input type="checkbox"/>	Equip. Inspection Sheets	<input type="checkbox"/>	Face Shield	<input type="checkbox"/>	
				<input type="checkbox"/>	Thermal Shield	<input type="checkbox"/>	
				<input type="checkbox"/>	Welding Mask	<input type="checkbox"/>	
				<input type="checkbox"/>	Cutting Glasses	<input type="checkbox"/>	
Any Modification to Tasks (list)			Other tasks or activities that may affect my activity			Reasons for any changes indicated above	

Environmental Compliance Considerations:

<input type="checkbox"/>	Generation of Hazardous Waste*	<input type="checkbox"/>	→Waste Identification & Manifesting - Marking, Placarding, Labeling
<input type="checkbox"/>	Generation of Investigation Derived Waste*	<input type="checkbox"/>	→Training & Licensing for Use of Radioactive Materials/Sources
<input type="checkbox"/>	Treatment, Storage, or Disposal of Hazardous Waste*	<input type="checkbox"/>	→ Containers: dated, labeled, closed, full, stored less than 90 days
<input type="checkbox"/>	Contingency to prevent or contain hazardous materials or oil spills or discharges to drains, body of water, soil*	<input type="checkbox"/>	→ Risk of explosion or catastrophic release due to chemical storage or processing involving reactivity, flammables, solvents or explosives
<input type="checkbox"/>	Disturbing of Asbestos Containing Materials (ACM)*	<input type="checkbox"/>	→Training & Licensing for Asbestos Remediation Activities
<input type="checkbox"/>	Application of Pesticides or Herbicides*	<input type="checkbox"/>	
<input type="checkbox"/>	Work on Above or Under-ground Storage Tanks*	<input type="checkbox"/>	
<input type="checkbox"/>	Transportation, Storage or Disposal of Radioactive Material*	<input type="checkbox"/>	
<input type="checkbox"/>	Activities producing or generating Air Emissions (or fugitive "fence-line" emissions) requiring either monitoring and/or permit*	<input type="checkbox"/>	
<input type="checkbox"/>	Excavations, Drilling, Probing or other activities that could impact underground utilities, pipelines, sewer or treatment systems.	<input type="checkbox"/>	
<input type="checkbox"/>	Shipment of Hazardous Waste off-site* Shipment of Samples in accordance with DOT/IATA	<input type="checkbox"/>	

* Indicates need for an environmental compliance plan.

ATTACHMENT H

START-3 AWARENESS OF ALLERGIES, CORRECTIVE LENS AND POISON IVY FOR PERSONELL

Team Member	Allergies	Type	Corrective Eye Wear	Poison Ivy	Comments
	(b) (6)				
Alex Byrum					
David McCarty					
Paola Vasquez					
Danette Parnell					
Melinda Luetke					
Ben Latham					
Sam Cheek					
Heth Parnell					
George Bumgarner					
Tori Gomez					
James Beavis					
Hilary Gafford					
Tobias Richards					

2 3 3 3 3 3
 10 10 10 10 10 10

Ammonia Inhalation Fact Sheet

Federal government recommendations to protect human health via the inhalation exposure pathway for ammonia

The Occupational Safety and Health Administration's (OSHA) permissible exposure limit (PEL) is 50 ppm. The National Institute of Occupational Health and Safety (NIOSH) was set an acceptable ten-hour exposure limit at 25 parts of ammonia per one million parts of air (ppm) and a short-term exposure level (STEL) (15 minutes) at 35 ppm.

EPA's Acute Exposure Guideline Levels (AEGLs):

Ammonia (ppm)

	10 min	30 min	60 min	4 hr	8 hr
AEGL 1	30	30	30	30	30
AEGL 2	220	220	160	110	110
AEGL 3	2,700	1,600	1,100	550	390

AEGLs represent threshold exposure limits for the general public and are applicable to emergency exposure periods ranging from 10 minutes to 8 hours. AEGL-1 and AEGL-2, and AEGL-3 values are distinguished by varying degrees of severity of toxic effects. The recommended exposure levels are applicable to the general population including infants and children, and other individuals who may be susceptible.

The three AEGLs have been defined as follows:

AEGL-1

Above this airborne concentration, expressed as parts per million or milligrams per cubic meter (ppm or mg/m³) the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and may go away soon and reversible upon stopping exposure.

AEGL-2

Above this airborne concentration (expressed as ppm or mg/m³) the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

AEGL-3

Above this airborne concentration (expressed as ppm or mg/m³) the general population, including susceptible individuals, could experience life-threatening health effects or death.

Airborne concentrations below the AEGL-1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste, and sensory irritation or certain asymptomatic, nonsensory effects.

Although the AEGL values represent threshold levels for the general public, including susceptible subpopulations, such as infants, children, the elderly, persons with asthma, and those with other illnesses, individuals could experience the effects described at concentrations below the corresponding AEGL.

INTEGRATED RISK INFORMATION SYSTEM (IRIS)

The EPA IRIS has a chronic Reference Concentration (RfC) for ammonia of approximately 0.1 ppm based upon total uncertainty factors of 30 (an uncertainty factor of 10 for sensitive individuals and a factor of 3 for database deficiencies including the lack of chronic data). The chronic RfC allows for continuous exposure up to a lifetime.

MINIMUM RISK LEVELS (MRLs)

The Agency for Toxic Substances and Disease Registry (ATSDR) has inhalation MRLs for ammonia of 1.7 ppm and 0.1 ppm for acute and chronic exposures, respectively.

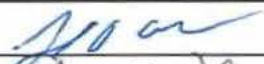
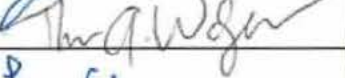






HEALTH AND SAFETY SIGN IN SHEET

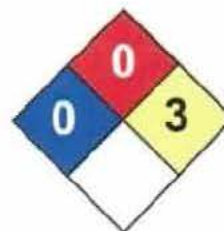
West Fertilizer

EPA REGION 6

West, Texas

Date: 4/19/2013

Name	Signature	Shift	Affiliation	Site Phone
Sam Cheek		Night	START	(b) (6)
Tom Walzer		Night	START	
Lee Ellmaker		Night	START	
David Crow		Day	START	
Mark Balhoff		Day	START	
Ben Latham		Day	START	
Derrick Cobb		Day	START	
Alex Byrum		Day ✓	START	
Carmen Assunto		Day	EPA-PA	
Mark Hayes		Day	EPA	
Althea Foster		Day	EPA	
Paige Delgado		Night	EPA	
Gary Moore		Night	EPA	
Assembly Point	EPA Mobile Command Post			
Health and Safety topics:	Ammonia Exposure, Downed Power Lines, Sharps, Fatigue, Situational Awareness, Vehicle traffic around command post, Hydration, Level D PPE, Hospital Route, On-site EMTs, Sign In/Out			
Additional Daily Comments:				



Health	2
Fire	1
Reactivity	1
Personal Protection	E

Material Safety Data Sheet Ammonium nitrate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ammonium nitrate

Catalog Codes: SLA3082, SLA4585

CAS#: 6484-52-2

RTECS: BR9050000

TSCA: TSCA 8(b) inventory: Ammonium nitrate

CI#: Not available.

Synonym: Ammonium Saltpeter; Nitric acid, ammonium salt

Chemical Name: Ammonium Nitrate

Chemical Formula: NH_4NO_3

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Ammonium nitrate	6484-52-2	100

Toxicological Data on Ingredients: Ammonium nitrate: ORAL (LD50): Acute: 2217 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. The substance may be toxic to blood, gastrointestinal tract. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 300°C (572°F)

Flash Points: CLOSED CUP: Higher than 93.3°C (200°F).

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of heat, of combustible materials, of organic materials. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat, of combustible materials, of organic materials, of metals.

Fire Fighting Media and Instructions:

Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

Special Remarks on Fire Hazards:

Caution: Strong Oxidizer. Contact with material may cause a fire. Contact with combustible or organic materials may cause fire.

Special Remarks on Explosion Hazards:

It is an oxidizing agent and can self-ignite/detonate when in contact with powdered metals and some organic materials such as Urea and Acetic Acid.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (white granular solid. Deliquescent solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 80.05 g/mole

Color: Not available.

pH (1% soln/water): 4.5 - 6.0 @ 25 deg. [Acidic.]

Boiling Point: Decomposition temperature: 210°C (410°F)

Melting Point: 169.6°C (337.3°F)

Critical Temperature: Not available.

Specific Gravity: 1.725 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, acetone.

Solubility:

Easily soluble in cold water, hot water. Soluble in acetone. Partially soluble in methanol. Insoluble in diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with reducing agents, combustible materials, organic materials, metals, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Also incompatible with finely powdered metals (aluminum, copper, chromium, iron, zinc brass, nickel, lead, manganese, magnesium, antimony), acetic acid, ammonium chloride, phosphorus, sodium perchlorate, sulfur, bismuth, cadmium, chlorides, cobalt, potassium and ammonium sulfate, sodium, sodium hypochlorite, sodium-potassium alloy, organic materials and combustible materials (paper, oil, charcoal, etc.)

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 2217 mg/kg [Rat].

Chronic Effects on Humans:

Causes damage to the following organs: lungs, mucous membranes. May cause damage to the following organs: blood, gastrointestinal tract.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

Carcinogenic effects: At this time, no studies were found on the possible carcinogenicity of Ammonium Nitrate in humans or experimental animals. However nitrates can be reduced to nitrites in the body, and the formed nitrites can subsequently react with amines to form suspect carcinogens N-nitrosamines. Genetic Effects: No genetic data was found for ammonium. However, in general, nitrates and nitrites are genotoxic. Reproductive Effects: There has been some association between consumption of nitrate-contaminated well water and birth defects, especially neural tube defects. However, these studies would not specifically implicate Ammonium Nitrate.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. It may be absorbed through intact skin. Eyes: Causes eye irritation. Inhalation: Causes respiratory tract (nose, throat), and mucous membrane irritation. Symptoms may include: coughing, severe lung congestion, difficulty breathing. Inhalation of large amounts may cause systemic acidosis, Methemoglobinemia with symptoms similar to acute ingestion. Ingestion: Gastroenteritis with abdominal pain, nausea, vomiting, diarrhea. Exposure to large amounts may affect behavior/central nervous system, and blood and cause Methemoglobinemia, and systemic

acidosis. Symptoms of Methemoglobinemia include cyanosis (blue lips, eyelids, earlobes, and skin), headache, fatigue, weakness, convulsions, dizziness, loss of coordination, nausea, vomiting, dyspnea, and drowsiness. It may also affect the cardiovascular system and cause increased or decreased heart rate, and hypotension. Chronic Potential Health Effects: Ingestion: The toxicity of nitrates is due to in vivo conversion to nitrites. Chronic ingestion of more than 5 mg/kg/day is considered unacceptable. Primary overdose effects include orthostatic hypotension and Methemoglobinemia. Orthostatic hypotension, faintness, fatigue, weakness, depression, mental impairment, dizziness, shortness of breath, and reflex tachycardia are common; headache, nausea and vomiting may also occur. Chronic ingestion may also cause nephritis.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 5.1: Oxidizing material.

Identification: : Ammonium Nitrate UNNA: 1942 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found. California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. Connecticut hazardous material survey.: Ammonium nitrate Rhode Island RTK hazardous substances: Ammonium nitrate Pennsylvania RTK: Ammonium nitrate Massachusetts RTK: Ammonium nitrate Massachusetts spill list: Ammonium nitrate New Jersey: Ammonium nitrate New Jersey spill list: Ammonium nitrate TSCA 8(b) inventory: Ammonium nitrate

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS C: Oxidizing material.

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 1

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 0

Reactivity: 3

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Ammonia

Synonyms & Trade Names Anhydrous ammonia, Aqua ammonia, Aqueous ammonia [Note: Often in an aqueous solution.]

CAS No.
7664-41-7

RTECS
No. BO0875000
(niosh-rtecs/BOD59F8.html)

DOT ID & Guide 1005 125 (<http://wwwapps.tc.gc.ca/saf-sec-sur/gmu/erg/guidepage.aspx?guide=125>)
(<http://www.cdc.gov/Other/disclaimer.html>) (anhydrous)
2672 154 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=154>)
(<http://www.cdc.gov/Other/disclaimer.html>) (10-35% solution)
2073 125 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=125>)
(<http://www.cdc.gov/Other/disclaimer.html>) (>35-50% solution)
1005 125 (<http://wwwapps.tc.gc.ca/saf-sec-sur/3/erg-gmu/erg/guidepage.aspx?guide=125>)
(<http://www.cdc.gov/Other/disclaimer.html>) (>50% solution)

Formula NH₃

Conversion 1 ppm =
0.70 mg/m³

IDLH 300 ppm
See: 7664417 (niosh/idlh/7664417.html)

Exposure Limits

NIOSH REL: TWA 25 ppm (18 mg/m³) ST 35 ppm (27 mg/m³)
OSHA PEL † (nengapdxg.html): TWA 50 ppm (35 mg/m³)

Measurement Methods

NIOSH 3800 (niosh/docs/2003-154/pdfs/3800.pdf),
6015 (niosh/docs/2003-154/pdfs/6015.pdf), 6016 (niosh/docs/2003-154/pdfs/6016.pdf);
OSHA ID188
(<http://www.osha.gov/dts/sltc/methods/inorganic/id188/id188>)
(<http://www.cdc.gov/Other/disclaimer.html>)
See: **NMAM** (niosh/docs/2003-154/) or **OSHA Methods**
(<http://www.osha.gov/dts/sltc/methods/index.html>)
(<http://www.cdc.gov/Other/disclaimer.html>)

Physical Description Colorless gas with a pungent, suffocating odor. [Note: Shipped as a liquefied compressed gas. Easily liquefied under pressure.]

MW:
17.0

BP: -
28°F

FRZ: -
108°F

Sol:
34%

VP: 8.5 atm

IP: 10.18 eV

FLP:
NA
(Gas)

UEL: 28%

LEL:
15%

RGasD: 0.60

[Note: Although NH_3 does not meet the DOT definition of a Flammable Gas (for labeling purposes it should be treated as one.)]

Incompatibilities & Reactivities Strong oxidizers, acids, halogens, salts of silver & zinc [Note: Corrosive to copper & galvanized surfaces.]

Exposure Routes inhalation, ingestion (solution), skin and/or eye contact (solution/liquid)

Symptoms irritation eyes, nose, throat; dyspnea (breathing difficulty), wheezing, chest pain; pulmonary edema; pink frothy sputum; skin burns, vesiculation; liquid: frostbite

Target Organs Eyes, skin, respiratory system

Personal Protection/Sanitation (See [protection codes \(protect.html\)](#))

Skin: Prevent skin contact

Eyes: Prevent eye contact

Wash skin: When contaminated (solution)

Remove: When wet or contaminated (solution)

Change: No recommendation

Provide: Eyewash (>10%), Quick drench (>10%)

First Aid (See [procedures \(firstaid.html\)](#))

Eye: Irrigate immediately (solution/liquid)

Skin: Water flush immediately (solution/liquid)

Breathing: Respiratory support

Swallow: Medical attention immediately (solution)

Respirator Recommendations

NIOSH

Up to 250 ppm:

(APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern*

(APF = 10) Any supplied-air respirator*

Up to 300 ppm:

(APF = 25) Any supplied-air respirator operated in a continuous-flow mode*

(APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against compound of concern*

(APF = 50) Any chemical cartridge respirator with a full facepiece and cartridge(s) providing protection against the compound of concern

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern

(APF = 50) Any self-contained breathing apparatus with a full facepiece

(APF = 50) Any supplied-air respirator with a full facepiece

Emergency or planned entry into unknown concentrations or IDLH conditions:

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive pressure breathing apparatus

Escape:

(APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern

Any appropriate escape-type, self-contained breathing apparatus

[Important additional information about respirator selection \(pgintrod.html#mustread\)](#)

See also: [INTRODUCTION \(/niosh/npg/pgintrod.html\)](#) See ICSC CARD: [0414 \(/niosh/ipcsneng/neng0414.html\)](#) See MEDICAL TESTS: [0013 \(/niosh/docs/2005-110/nmed0013.html\)](#)

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